

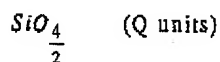
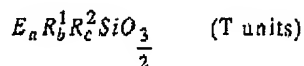
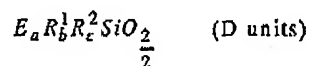
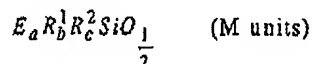
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 Reply to Office Action of June 20, 2003

Atty Dkt No. WSIL 0160 PUS

### Amendments to the Claims:

*This listing of claims will replace all prior versions, and listings, of claims in the application:*

1. (Currently Amended) A high weather and chemical resistant, addition-crosslinkable, epoxy-functional organopolysiloxane resin which contains at least one or more of the repeating units having the formulae:



wherein E is an epoxy-functional C<sub>1-18</sub> hydrocarbon group containing one or more oxygen atoms, provided that no oxygen atom is directly bonded to a Si- atom; and

R<sup>1</sup> and R<sup>2</sup> are independently a C<sub>1-20</sub> hydrocarbon, optionally interspersed with a heteroatom linking group;

a is an integer of 0, 1, or 2;

b is an integer of 0, 1, 2 or 3;

c is an integer of 0, 1, 2 or 3; and

in M units, a+b+c=3,

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in D units,  $a+b+c=2$ ,in T units,  $a+b+c=1$ ,

wherein

~~the M units are present in less than about 40 mole percent;~~the D units are present in an amount of ~~[[up to]]~~ about ~~[[40]]~~ 30 mole percent;

[[and]]

the T units are present in an amount of about 70 mole percent;the molecule, on average, contains at least two E components; and

wherein the hydrocarbon group of E comprises a  $C_{3-12}$  hydrocarbon group, the epoxy-functional organopolysiloxane resin has an epoxy equivalent weight in the range of about 200-600, the epoxy functional organopolysiloxane resin has a viscosity in the range of about 200-70,000 cps at 25°C, and the E is glycidoxypropyl



2. (Cancelled)

3. (Original) The resin of claim 1 wherein the epoxy-functional organopolysiloxane resin has an alkoxy content of less than about 20 weight percent, based on the weight of the epoxy-functional organopolysiloxane resin.

4. (Original) The resin of claim 1 wherein the epoxy-functional organopolysiloxane resin has an epoxy equivalent weight in the range of about 150-1000.

5-7. (Cancelled)

8. (Currently Amended) The resin of claim ~~[[6]]~~ 1 wherein the epoxy-functional organopolysiloxane resin comprises T units and the T units include structures selected from the group consisting of silsesquioxane and polysilsesquioxane structures.

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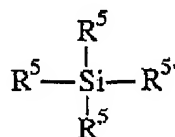
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9. (Original) The resin of claim 1 wherein the resin has a molecular weight between about 750 and 25,000.

10. (Original) The resin of claim 1 wherein the epoxy-functional organopolysiloxane resin is prepared by reacting a silicone resin with a silane having at least one epoxy group per molecule.

11. (Original) The resin of claim 10 wherein the silane is represented by the formula:



wherein each  $\text{R}^5$  is individually selected from the group consisting of alkyl ( $\text{C}_{1-12}$ ), aryl ( $\text{C}_{6-9}$ ), vinyl, glycol, alkoxy ( $\text{C}_{1-12}$ ), and an epoxy functional  $\text{C}_{1-18}$  hydrocarbon group of the formula  $\text{R}^6 - \text{E}^1$  wherein  $\text{E}^1$  comprises an epoxy group and  $\text{R}^6$  comprises a  $\text{C}_{1-18}$  hydrocarbon group optionally interspersed with at least one heteroatom linking group, with the proviso that at least one  $\text{R}^5$  comprises  $\text{R}^6 - \text{E}^1$ .

12. (Original) The resin of claim 11 wherein the heteroatom linking group, if present, is not adjacent to the  $\text{E}^1$  group.

13. (Original) The resin of claim 11 wherein the hydrocarbon group of the  $\text{R}^6$  comprises a  $\text{C}_{3-12}$  hydrocarbon group.

14. (Original) The resin of claim 11 wherein the silane has a molecular weight in the range of about 100 to about 750.

15. (Original) The resin of claim 14 wherein the silane has an epoxy-functionality in the range of about 1 to about 4.

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16. (Original) The resin of claim 15 wherein the silane has an alkoxy functionality in the range of about 1 to about 4.

17. (Cancelled)

18. (Currently Amended) The resin of claim 11 wherein the silane is a  $\gamma$ -glycidoxypropylsilane having  $C_{1-12}$  alkoxygroups.

19. (Original) The resin of claim 10 wherein the silicone has a molecular weight in the range of about 300 to about 15000.

20. (Cancelled)

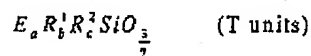
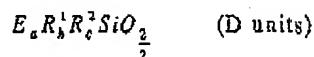
21. (Original) The resin of claim 1 wherein the resin is a liquid and has a molecular weight of about 500-5,000.

22. (Original) The resin of claim 21 wherein the resin has a molecular weight of about 1,200.

23. (Original) The resin of claim 22 wherein the molecule contains at least three E components.

24-25. (Cancelled)

26. (Currently Amended) A high weather and chemical resistant, addition-crosslinkable, epoxy-functional organopolysiloxane resin which contains at least one or more of the repeating units having the formulae:



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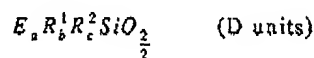
wherein E is an epoxy-functional  $C_{1-18}$  hydrocarbon group containing one or more oxygen atoms, provided that no oxygen atom is directly bonded to a Si-atom;  
 and  
 $R^1$  and  $R^2$  are independently a  $C_{1-20}$  hydrocarbon, optionally interspersed with a heteroatom linking group;  
 a is an integer of 0, 1, or 2;  
 b is an integer of 0, 1, 2 or 3;  
 c is an integer of 0, 1, 2 or 3; and  
 in D units,  $a+b+c=2$ ,  
 in T units,  $a+b+c=1$ ,

wherein the D units are present in about 30 mole percent;  
 the T units are present in about 70 mole percent; [[and]]  
 the molecule, on average, contains at least two E components; and  
wherein the epoxy-functional organopolysiloxane resin has an epoxy equivalent weight in the range of about 200-600, the epoxy-functional organopolysiloxane resin has a viscosity in the range of about 200-70,000 cps at 25°C, and the E is glycidoxypropyl



27-29. (Cancelled)

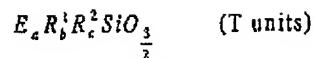
30. (Previously Presented) An epoxy-functional organopolysiloxane coating composition comprising:  
 a hardener;  
 an acrylic resin; and  
 an epoxy-functional organopolysiloxane resin which contains at least one or more of the repeating units having the formulae:



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wherein E is an epoxy-functional  $C_{1-18}$  hydrocarbon group containing one or more oxygen atoms, provided that no oxygen atom is directly bonded to a Si-atom; and

$R^1$  and  $R^2$  are independently a  $C_{1-20}$  hydrocarbon, optionally interspersed with a heteroatom linking group;

a is an integer of 0, 1, or 2;

b is an integer of 0, 1, 2 or 3;

c is an integer of 0, 1, 2 or 3; and

in D units,  $a+b+c=2$ ,

in T units,  $a+b+c=1$ ,

wherein the D units are present in about 30 mole percent;  
the T units are present in about 70 mole percent; and  
the molecule, on average, contains at least two E components.

31. (Previously Presented) The composition of claim 30 wherein the epoxy-functional organopolysiloxane resin has an epoxy equivalent weight in the range of about 200-600.

32. (Previously Presented) The composition of claim 31 wherein the epoxy-functional organopolysiloxane resin has a viscosity in the range of about 200-70,000 cps at 25°C.

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33. (Previously Presented) The composition of claim 32 wherein the E is glycidoxypropyl

